What is claimed is:

1. A semiconductor device manufacturing method comprising:

(a) a step of preparing complexes, each having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements; and

(b) a step of providing a plurality of supply sources corresponding to different types of semiconductor devices and sequentially processing the complexes supplied from any selected one of said plurality of supply sources.

2. A semiconductor device manufacturing method comprising:

(a) a step of preparing complexes, each having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements;

(b) a step of linking any selected one of a plurality of supply sections corresponding to different types of semiconductor devices to a sorting section capable of liking to one of said plurality of supply sections, and separating said sealed elements of each of the complexes taken in from a supply source corresponding to the selected supply section, said complexes having a form specific to the selected supply section; and

(c) a step of sorting the separated semiconductor devices in said sorting section.

3. The semiconductor device manufacturing method according to claim 1, wherein

each of said complexes in said supply source has a form of a tape-shaped frame carrying a plurality of sealed elements arranged consecutively at predetermined regular intervals, a form of a ring member supporting an adhesive tape bonded to a plurality of sealed

elements, or a form of a strip-shaped frame carrying a plurality of sealed elements arranged consecutively at predetermined regular intervals.

4. The semiconductor device manufacturing method according to claim 1, wherein

said sequential processing of the complexes includes the steps of separating the semiconductor devices of each of said complexes and sorting said separated semiconductor devices.

5. The semiconductor device manufacturing method according to claim 1, wherein

said sequential processing of the complexes includes the steps of separating the sealed elements of each of said complexes, sorting the separated semiconductor devices by means of the performance test, and taping good ones.

6. A semiconductor device manufacturing method comprising:

(a) a step of preparing tape-shaped frames of complexes, each having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements, said plurality of sealed elements of each complex being arranged consecutively at predetermined regular intervals;

(b) a step of setting a reel carrying said tape-shaped frame wound around it in a supply section, supplying said tape-shaped frame from said reel, and then, separating said sealed elements from said tape-shaped frame in said supply section; and

(c) a step of supplying the separated semiconductor devices from said supply section to a sorting section, and then, sorting said semiconductor devices by means of a performance test in said sorting section.

7. A semiconductor device manufacturing method comprising:

(a) a step of preparing tape-shaped frames of complexes, each having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements, said plurality of sealed elements of each complex being arranged consecutively at predetermined regular intervals;

(b) a step of setting a reel carrying said tape-shaped frame wound around it in a supply section, supplying said tape-shaped frame from said reel, and then, separating said sealed elements from said tape-shaped frame in said supply section;

(c) a step of aligning the separated semiconductor devices linearly on a straight parts feeder and supplying linearly said aligned semiconductor devices to a sorting section on by one by means of said parts feeder; and

(d) a step of sorting said semiconductor devices by means of a performance test in said sorting section.

8. The semiconductor device manufacturing method according to claim 7, wherein

a given number of sealed elements arranged in the form of a matrix of a plurality of rows and a plurality of columns are collectively cut and separated by means of a cutting metal die when separating sealed elements from said tape-shaped frame in said step (b), said tape-shaped frame carrying a plurality of sealed elements arranged in rows along itself.

9. The semiconductor device manufacturing method according to claim 8, wherein

in said step (b), the collectively cut semiconductor devices are received in respective recesses of a conveyor having the recesses arranged in a matrix of a plurality of rows and a plurality of columns so as to correspond to said matrix of a plurality of rows and a plurality of columns.

10. The semiconductor device manufacturing method

according to claim 7, wherein

said collectively cutting operation in step (b) is an operation of cutting and separating sealed elements arranged in the form of a matrix of 4 rows and 6 columns, and the cut and separated sealed elements are received in the respective recesses arranged in 4 rows and 6 columns of the conveyor.

11. The semiconductor device manufacturing method according to claim 7, wherein

said collectively cutting operation in step (b) is an operation of cutting and separating sealed elements by means of a cutting punch arranged in the form of a matrix of a plurality of rows and a plurality of columns, while sucking the sealed elements by vacuum, and then, the collectively cut semiconductor devices are received in respective recesses of a conveyor having the recesses arranged in a plurality of rows and a plurality of columns corresponding to said matrix of a plurality of rows and a plurality of columns, while continuously sucking the sealed elements by vacuum by means of said cutting punch.

12. The semiconductor device manufacturing method according to claim 11, wherein

in said step (b), said sealed elements are cut and separated by said cutting punch, while sucking the sealed elements by vacuum by means of said cutting punch, and then, the front ends of said cutting punch are driven to enter the respective recesses of said conveyor, while continuously sucking the sealed elements by vacuum by means of said cutting punch, and then, stopping said suction by vacuum of said cutting punch so as to make the separated semiconductor devices to be received in the respective recesses of said conveyor.

13. The semiconductor device manufacturing method according to claim 12, wherein

in said step (b), after the cutting operation and the front ends of said cutting punch are driven to enter the respective recesses of said conveyor, while continuously sucking the sealed elements by vacuum by means of said cutting punch, the suction by vacuum of said cutting punch is stopped and, at the same time, the separated semiconductor devices are sucked by vacuum toward the respective recesses of the conveyor so as to make the semiconductor devices to be received in the respective recesses of said conveyor.

14. The semiconductor device manufacturing method according to claim 7, wherein

the semiconductor devices of a row running along the tape-shaped frame are sucked by means of a robot hand section out of the semiconductor devices received in the respective recesses arranged in the form of a matrix in the conveyor in said step (b), and then, said robot hand section is turned by 90° to change the direction of arrangement of said sucked and held semiconductor devices by 90° so as to deliver the semiconductor devices on said straight parts feeder in a direction parallel to the direction of said parts feeder of said step (c).

15. The semiconductor device manufacturing method according to claim 14, wherein

two conveyors are provided, and said two conveyors containing the semiconductor devices cut and separated in said step (b) are driven to reciprocate alternately.

16. The semiconductor device manufacturing method according to claim 15, wherein

said two conveyors are driven to reciprocate synchronously in such a way that, while one of them is moving forward, the other is moving backward on the same path and, when the two conveyors meet each other, one of them is moved upward while the other is moved downward in a concerted manner in order to avoid collision.

17. A semiconductor device manufacturing method comprising:

(a) a step of preparing strip-shaped frames of complexes, each having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements, said plurality of sealed elements of each complex being arranged at predetermined regular intervals;

(b) a step of supplying said strip-shaped frames to a supply section and cutting and separating said sealed elements;

(c) a step of aligning said cut and separated semiconductor devices on a straight parts feeder and supplying said straightly aligned semiconductor devices to a sorting section one by one by means of said parts feeder; and

(d) a step of sorting said semiconductor devices by means of a performance test in said sorting section.

18. A semiconductor device manufacturing method comprising:

(a) a step of preparing ring members, each supporting an adhesive tape to which a plurality of sealed elements having respective a semiconductor pellet are bonded;

(b) a step of supplying said ring member to a supply section, and then, separating said sealed elements from said adhesive tape of said ring member; and

(c) a step of supplying said semiconductor devices separated from said adhesive tape from said supply section to a sorting section, and then, sorting said semiconductor devices by means of a performance test in said sorting section.

19. A semiconductor device manufacturing method comprising:

(a) a step of preparing ring members, each supporting an adhesive tape to which a plurality of sealed elements having

respective a semiconductor pellet are bonded;

(b) a step of supplying said ring member to a supply section, and then, separating said sealed elements from said adhesive tape of said ring member; and

(c) a step of aligning said semiconductor devices separated from said adhesive tape on a straight parts feeder, and supplying said straightly aligned semiconductor devices to a sorting section one by one by means of said parts feeder; and

(d) a step of sorting said semiconductor devices by means of a performance test in said sorting section.

20. The semiconductor device manufacturing method according to claim 19, wherein

said ring member is sucked and held at four points and taken out from the container containing said ring member when separating the sealed elements from the adhesive tape of said ring member in said step (b), and then, moved to a pickup section while it is still being sucked and held at four points.

21. The semiconductor device manufacturing method according to claim 19, wherein

said sealed elements are pushed up from the rear surface of said adhesive tape of said ring member in the pickup section of the supply section and picked up by a handling section so as to be separated from said adhesive tape when said sealed elements are separated from the adhesive tape of said ring member in said step (b).

22. The semiconductor device manufacturing method according to claim 21, wherein

said sealed elements are grasped by said handling section and sucked and held by vacuum so as to be separated from said adhesive tape when said sealed elements are picked up by said handling section.

23. The semiconductor device manufacturing method

according to claim 19, wherein

said semiconductor devices are spirally moved and turned upside down to make a surface opposite to a mounting surface face upward in said parts feeder, and then, the semiconductor devices are supplied to said sorting section when they are linearly aligned and supplied one by one to the sorting section by said parts feeder in said step (c).

24. A semiconductor device manufacturing method comprising:

(a) a step of preparing a plurality of complexes, each having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements;

(b) a step of linking any selected one of a plurality of supply sections corresponding to different types of semiconductor devices to a sorting section capable of linking to one of said plurality of supply sections, and separating said sealed elements of each of the complexes taken in from a supply source corresponding to the selected supply section, said complexes having a form specific to the selected supply section; and

(c) a step of sorting the separated semiconductor devices in said sorting section, said sorting section having a processing capacity smaller than the supplying capacity of said supply section.

25. The semiconductor device manufacturing method according to claim 24, wherein

said supply section separates said semiconductor devices of said complex and said sorting section performs an operation of sorting the separated semiconductor devices and an operation of taping good semiconductor devices.

26. A semiconductor device manufacturing method comprising:

(a) a step of preparing a plurality of complexes, each having

a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements;

(b) a step of linking any selected one of a plurality of supply sections corresponding to different types of semiconductor devices to a sorting section capable of linking to one of said plurality of supply sections, and separating said sealed elements of each of the complexes taken in from a supply source corresponding to the selected supply section, said complexes having a form specific to the selected supply section; and

(c) a step of aligning said separated semiconductor devices on a straight parts feeder, detecting the amount of semiconductor devices arranged on said parts feeder by means of a sensor arranged at said parts feeder, and supplying said straightly aligned semiconductor devices to a sorting section one by one by means of said parts feeder, while controlling the rate of supplying semiconductor devices from said supply section by feeding back the information obtained by said detecting operation to said supply section; and

(d) a step of sorting said semiconductor devices by means of a performance test in said sorting section.

27. The semiconductor device manufacturing method according to claim 26, wherein

when a semiconductor device is detected at a predetermined position on the midway of said parts feeder by said sensor in said step (c), said supply section temporarily stops to supply said separated semiconductor devices to said sorting section by feeding back the information.

28. A semiconductor device sorting system comprising:

(a) a supply section equipped with a cutting metal die for collectively cutting a given number of sealed elements from a tape-shaped frame of a complex having a plurality of sealed elements

having a semiconductor pellet and a link member for linking said sealed elements, said sealed elements being arranged at predetermined intervals; and

(b) a sorting section for sorting the semiconductor devices separated by and supplied from said supply section by means of a performance test.

29. A semiconductor device sorting system comprising:

(a) a supply section equipped with a cutting metal die for collectively cutting a given number of sealed elements from a tape-shaped frame of a complex having a plurality of sealed elements having a semiconductor pellet and a link member for linking said sealed elements, said sealed elements being arranged at predetermined intervals;

(b) a sorting section for sorting the semiconductor devices separated by said supply section, and taping good ones selected by said sorting operation; and

(c) a straight parts feeder for supplying the semiconductor devices, which are separated by said supply section and aligned linearly, to said sorting section one by one.

30. The semiconductor device sorting system according to claim 29, wherein

said cutting metal die of said supply section is a metal die adapted to collectively cut a given number of sealed elements arranged in the form of a matrix of a plurality of rows and a plurality of columns out of the sealed elements arranged in rows running in parallel with said tape-shaped frame.

31. The semiconductor device sorting system according to claim 30, wherein

said cutting metal die is provided with cutting punches for cutting said tape-shaped frame while sucking and holding the same when cutting said sealed elements from said tape-shaped frame.

32. A semiconductor device sorting system comprising:

(a) a supply section for separating a plurality of sealed elements each having a semiconductor pellet one by one from an adhesive tape of a ring member of a complex supporting said adhesive tape to which said sealed elements are bonded; and

(b) a sorting section for sorting the semiconductor devices separated from said adhesive tape and supplied thereto by said supply section by means of a performance test.

33. A semiconductor device sorting system comprising:

(a) a supply section for separating a plurality of sealed elements each having a semiconductor pellet one by one from an adhesive tape of a ring member of a complex supporting said adhesive tape to which said sealed elements are bonded;

(b) a sorting section for sorting the semiconductor devices separated by said supply section, and taping good ones selected by said sorting operation; and

(c) a straight parts feeder for supplying the semiconductor devices, which are separated by said supply section and aligned linearly one by one to said sorting section.

34. The semiconductor device sorting system according to claim 33, wherein

said supply section has a push up section for pushing up said sealed elements from the back surface of said adhesive tape and a handling section for picking up said sealed elements pushed up by said push up section and delivering said sealed elements to said parts feeder.

35. The semiconductor device sorting system according to claim 34, wherein

said adhesive tape and said sealed elements are separated from each other as said handling section grasps and lifts said sealed elements by sucking them by vacuum.